

TECPak™

586 SERIES

USER'S MANUAL



TEMPERATURE
CONTROLLER

Specifications

All values relate to a one-hour warm-up period.
Specifications for standard models. Custom models may vary.

Description	586-04-56	586-08-26	586-08-56	586-15-28
Drive Channel				
Current				
Range (A)	4	8	8	15
Compliance Voltage (V)	56	26	56	28
Max Power (W)	190	190	392	345
Resolution (A)	0.01	0.01	0.01	0.01
Accuracy (\pm [% set point + A])	0.5 + 0.01	0.5 + 0.01	0.5 + 0.01	0.5 + 0.01
Noise/Ripple (mA, rms)	< 15	< 15	< 20	< 25
Temperature Control				
Range ($^{\circ}$ C) ¹		-99 to 250		
Resolution ($^{\circ}$ C)		0.001 ²		
Thermistor Accuracy (\pm $^{\circ}$ C) ³		0.05 ⁴		
LM335 Accuracy (\pm $^{\circ}$ C) ³		0.05		
RTD Accuracy (\pm $^{\circ}$ C) ³		0.05		
Short Term Stability (1hr) (\pm $^{\circ}$ C) ⁵		0.004		
Short Term Stability (24hr) (\pm $^{\circ}$ C) ⁵		0.01		
Measurement Channels				
Current				
Resolution (mA)		10		
Accuracy (\pm mA)	10	20	20	30
Voltage				
Resolution (mV)		10		
Accuracy (\pm V)		0.05		
Sensor ⁶				
<i>10μA Thermistor</i>				
Range (k Ω)		0.1 – 450		
Resolution (k Ω)		0.01		
Primary Accuracy (\pm [% read + k Ω])		0.05 + 50		
Aux Accuracy (\pm [% read + k Ω])		0.20 + 50		
<i>100μA Thermistor</i>				
Range (k Ω)		0.05 – 45		
Resolution (k Ω)		0.001		

¹ Software limits. Actual range dependent on sensor type and system dynamics

² RTD and auxiliary sensor resolution 0.01 $^{\circ}$ C

³ Accuracy figures are the additional error the 5400 adds to the measurement, and does not include the sensor uncertainties.

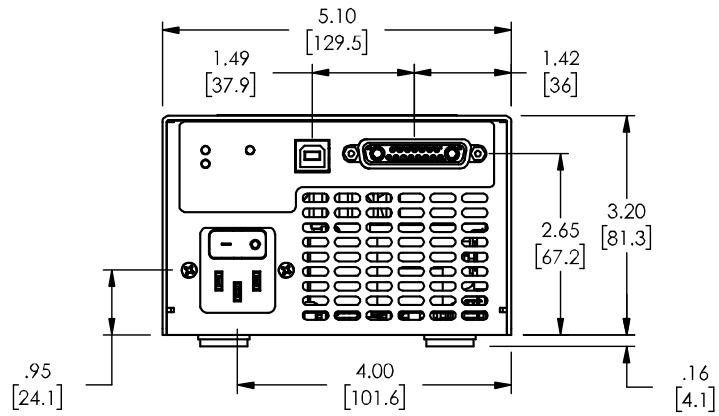
⁴ 25 $^{\circ}$ C, 100 μ A thermistor

⁵ Stability measurements done at 25 $^{\circ}$ C using a 10k Ω thermistor on the 100 μ A setting. The number is 1/2 the peak-to-peak deviation from the average over the measurement period.

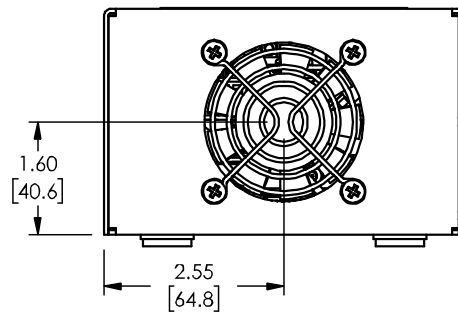
⁶ Specifications apply to both primary and auxiliary sensors unless otherwise indicated.

Description	586-04-56	586-08-26	586-08-56	586-15-28
Accuracy (\pm [% reading + k Ω])	0.05 + 5			
<i>LM335</i>				
Bias (mA)	1			
Range (mV)	1730 – 4250			
Resolution (mV)	0.1			
Accuracy (\pm [% reading + mV])	0.3 + 1			
<i>RTD</i>				
Range (Ω)	20 – 192			
Resolution (Ω)	0.01			
Accuracy (\pm [% reading + Ω])	0.03 + 0.1			
Current Limit				
Resolution (A)	0.1			
Accuracy (\pm A)	0.2			
Other				
Fan Supply	8 – 12V, 350mA max			
TEC Connector	Female 17W2			
Computer Interface	USB 2.0			
	90 – 240 V, 50/60 Hz			
Power	250W	250W	600W	600W
Size (H x W x D) [inches (mm)]	3.5 (90) x 12 (305) x 14 (356)			
Weight [lbs (kg)]	11.6 [5.3]			
Operating Temperature	+10°C to +40°C			
Storage Temperature	-20°C to +60°C			

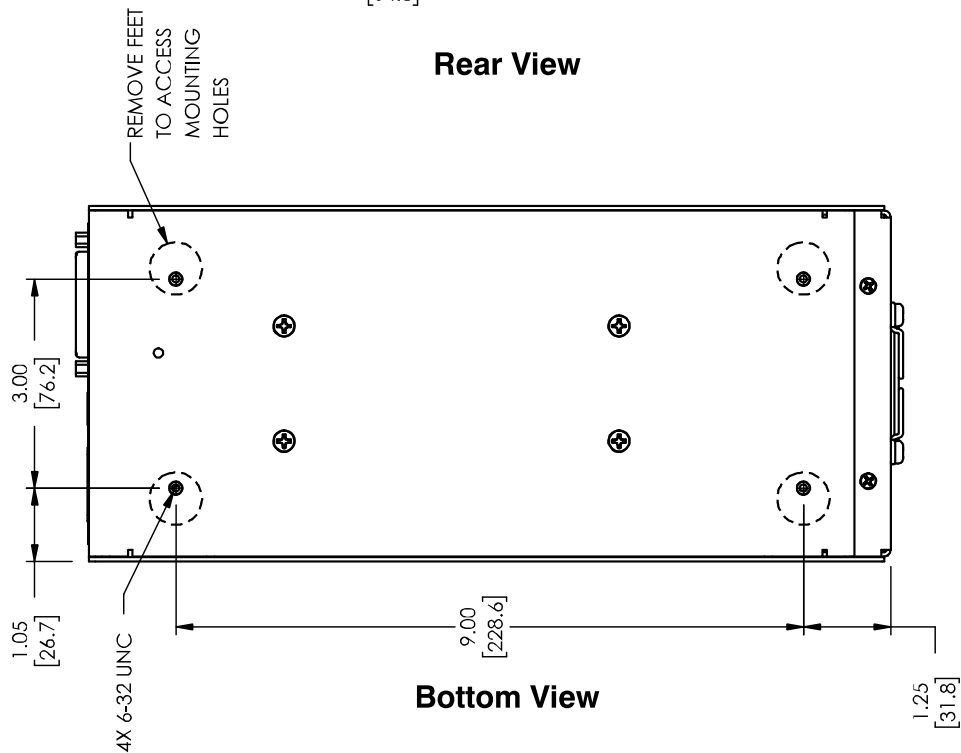
Mechanical Drawings



Front View



Rear View



Bottom View

